CURRENT LITERATURE.

BOOK REVIEWS.

Pfeffer's Physiology.

ALMOST as soon as the German edition of this great work appeared, announcement was made that it would be translated into English by Professor Ewart. The two years that have elapsed since the German edition was published have only whetted the desire of English-speaking students to have the work in a more familiar tongue, because they have found out how intricate and obscure the style of the original is. There is no need to speak again of the contents or value of the work itself.[1] Use of it has amply justified the enthusiastic reception with which it was greeted by students everywhere. Doubly welcome, therefore, is the elegant volume now before us, faultless from the bookmaker's point of view. One must pay for such elegance, however, and we would that the English edition had been kept down to the price of the German, instead of the almost prohibitive $7.00. The necessity of having both — German for what Pfeffer says and English for what Ewart says he says — makes the high price the greater burden.

For when one compares the English text with the original he is immediately impressed by the fact that this is not a translation in the usual sense. Indeed, the translator says in his preface: "The difficulty of the original German has necessitated the exercise of a certain freedom in the process of translation, but an exact interpretation of the original has been given throughout." No one could expect a literal translation of the original, and we are grateful that a free rendering in smooth idiomatic English has been made. While we here acknowledge to the full the indebtedness of students to Dr. Ewart for time and labor which he has expended to put before them this English version, it will not be considered ungracious, if for the benefit of users we raise the question whether it was necessary to take as many liberties with the text as the translator has done. These consist in the addition, omission, and alteration of qualifying words and phrases, to such an extent as often to make it questionable whether or not a given passage is "an exact interpretation of the original." Forewarned of this freedom of interpretation, it will be necessary for one to refer to the German text to determine for himself precisely what Pfeffer says, for it is these very qualifications which restrict or color his statements. Specific cases might be cited in almost unlimited number, were it not easy for anyone who cares to verify the statement to find

[1] See BOT. GAZ. **25**: 132. 1898.

numerous illustrations. The opening paragraph of § 49 may be taken as a fair example of general "interpretation." For instances of alteration take these two: "unvollkommenen Bundeln" of mosses (p. 197) is rendered "rudimentary vascular bundles (p. 216). Pfeffer would probably deny the morphological implication in the latter phrase; at least he had avoided it in his use of the original adjective. Again: "nachweisbaren Producten" of photosynthesis (p. 299) are not necessarily "visible products" (p. 317), and the change makes the sentence untrue. Nor will it be fair to consider the passage of the English proofs through Pfeffer's hands as equivalent to an endorsement of the translator's particular modes of expression.

The comparison with the original is necessitated further by the avowed changes which Dr. Ewart has wisely introduced. In the main these are indicated by brackets, but this should have been uniformly done. The later literature is cited and other betterments are noticeable. The avoidance of new terms is desirable whenever it does not involve too great circumlocution, and the new book has practically none. We note, however, the increased use of photosynthesis, which is making its way in spite of conservatism, though it is not used consistently. Ewart is in error regarding the term photosyntax (footnote, p. 302), which he rejects as unnecessary. It was defined by the proponent precisely as photosynthesis (p. 292), and could by no means include "all cases of carbon dioxide assimilation."

Some of the slips of the German text have been corrected, but two notable ones in § 40 have been missed. On p. 250 the amount of water transpired under favorable conditions is given as 1 to 10^{cc} per 24 hours "from a single square *centimeter* of leaf surface." This should read decimeter, the amounts named being 100 times too large. On p. 251 also the last two sentences of the middle paragraph should be transposed, the last one being meaningless in its present position.

Inasmuch as the cross-references are to sections it would have been convenient to have the section numbers in the page head, as in the German book. This disadvantage is much more than balanced, however, by the very complete index, an essential feature absent from the original.

The second volume is awaited with the greatest interest, and we trust the English version will appear promptly as promised. And we must not allow any differences of opinion or defects in the translation to minify our obligations to Professor Ewart and to the Clarendon Press for the helpful and elegant volumes.—C. R. B.

NOTES FOR STUDENTS.

DR. J. LOEB has begun the publication of a series of articles containing new facts and ideas concerning the constitution of living matter, to which the attention of botanists should be directed. The first one,[2] on the poisonous

[2] Am. Jour. Physiol. **3**: 327–338. 1900.